

Long Island Offshore Wind Park

140 Megawatts of Offshore Wind Energy



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Organizations Supporting Long Island Wind Energy



Long Island Offshore Wind Initiative

- Coalition of environmental, civic, health & other stakeholder organizations
- Support development of renewable energy resources for Long Island
- Emphasis on advocacy and public education

www.lioffshorewindenergy.org

Where is it Being Located and Why?

■ Siting Studies Conducted by LIPA/ NYSERDA

- Phase I & II- 2002/03
- Screening Based on Several Factors, including:
 - Avg Wind speed (*over 18 mph*)
 - Required water depths (*45 – 70 feet*)
 - Minimum distance from Shore
 - Birds and migratory routes
 - Fishing & marine life
 - Shipping lanes & navigation
 - Ability to interconnect to LIPA electric grid
 - Aesthetics
 - Sensitive habitats
 - Underwater Structure

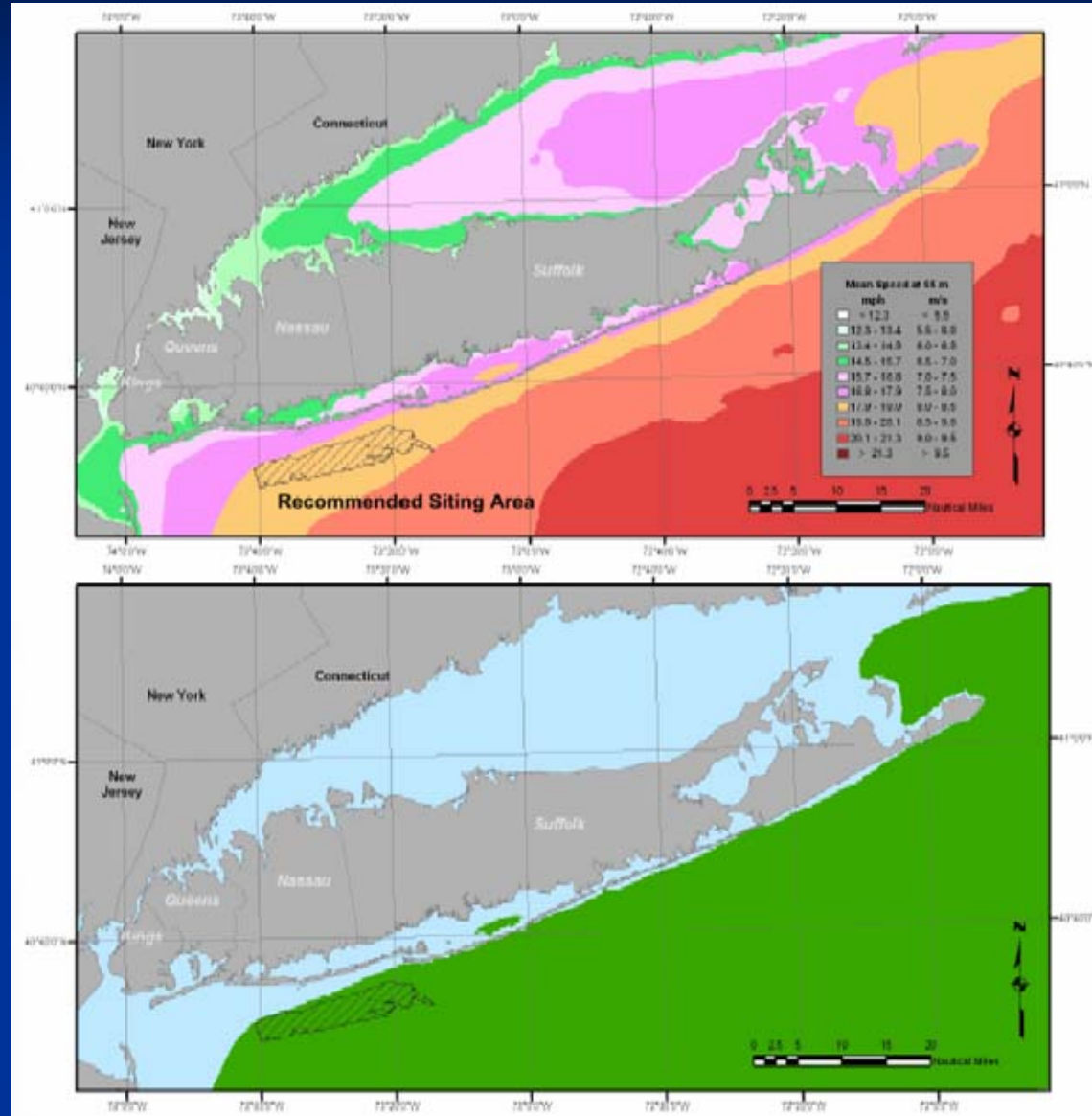


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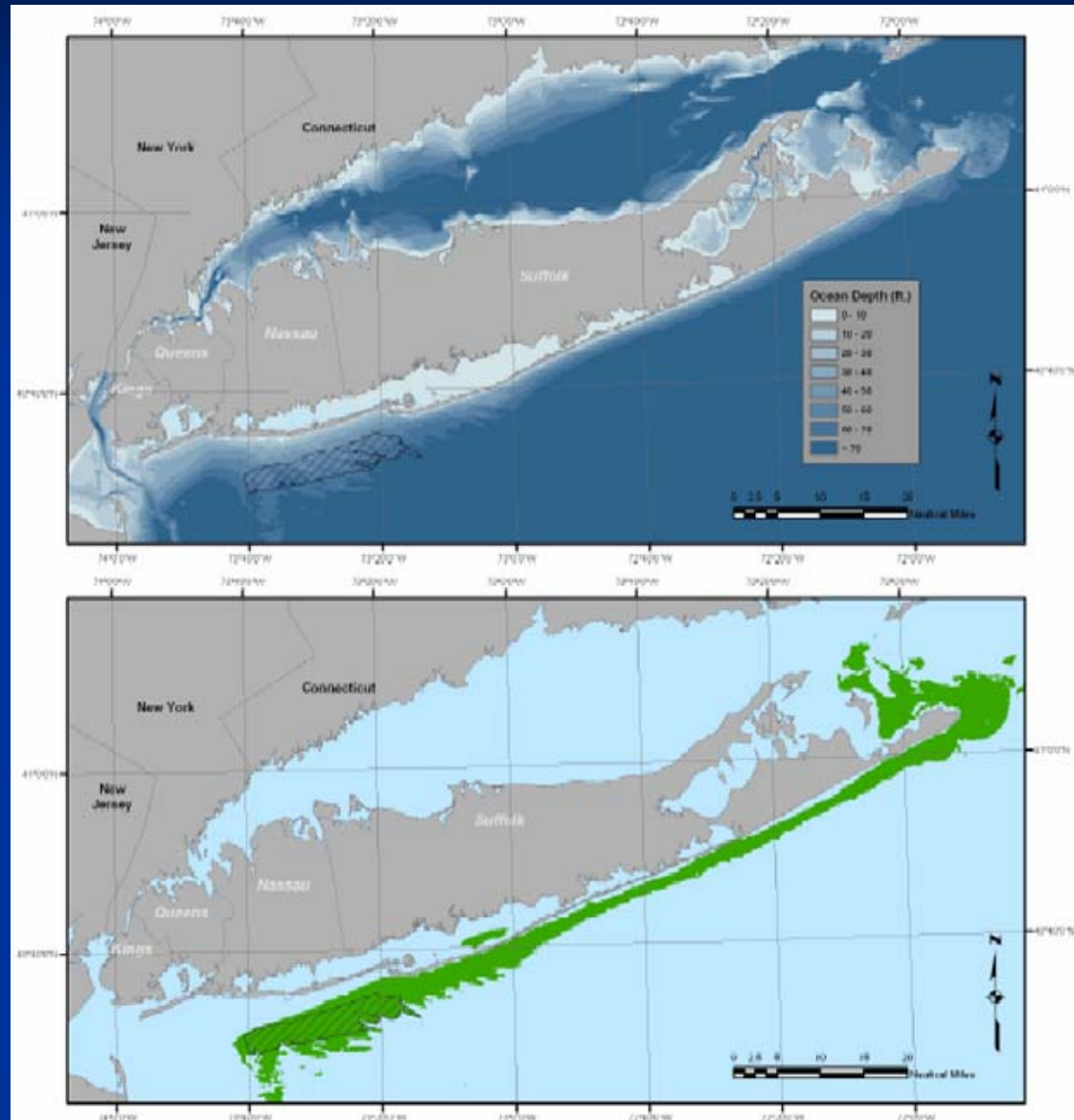
Site Selection Screening Process

- Starts with a Wind Resource Map of Long Island
- Need at least 18mph average annual wind speeds at 65m (green area)



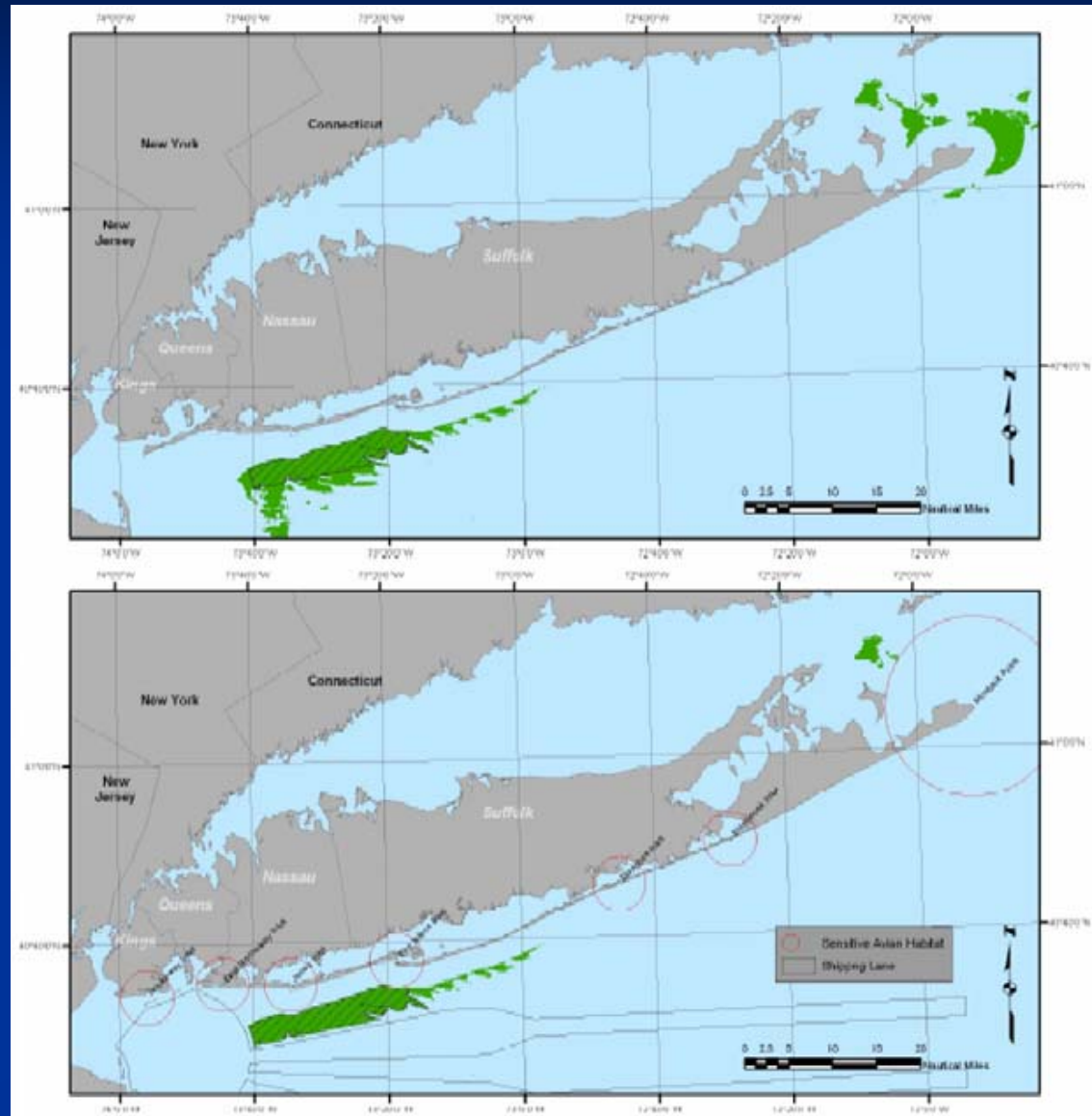
Site Selection Screening Process

- Map indicates relative water depths around Long Island
- Monopile foundation design limits water depth to less than 70 ft. (green area)



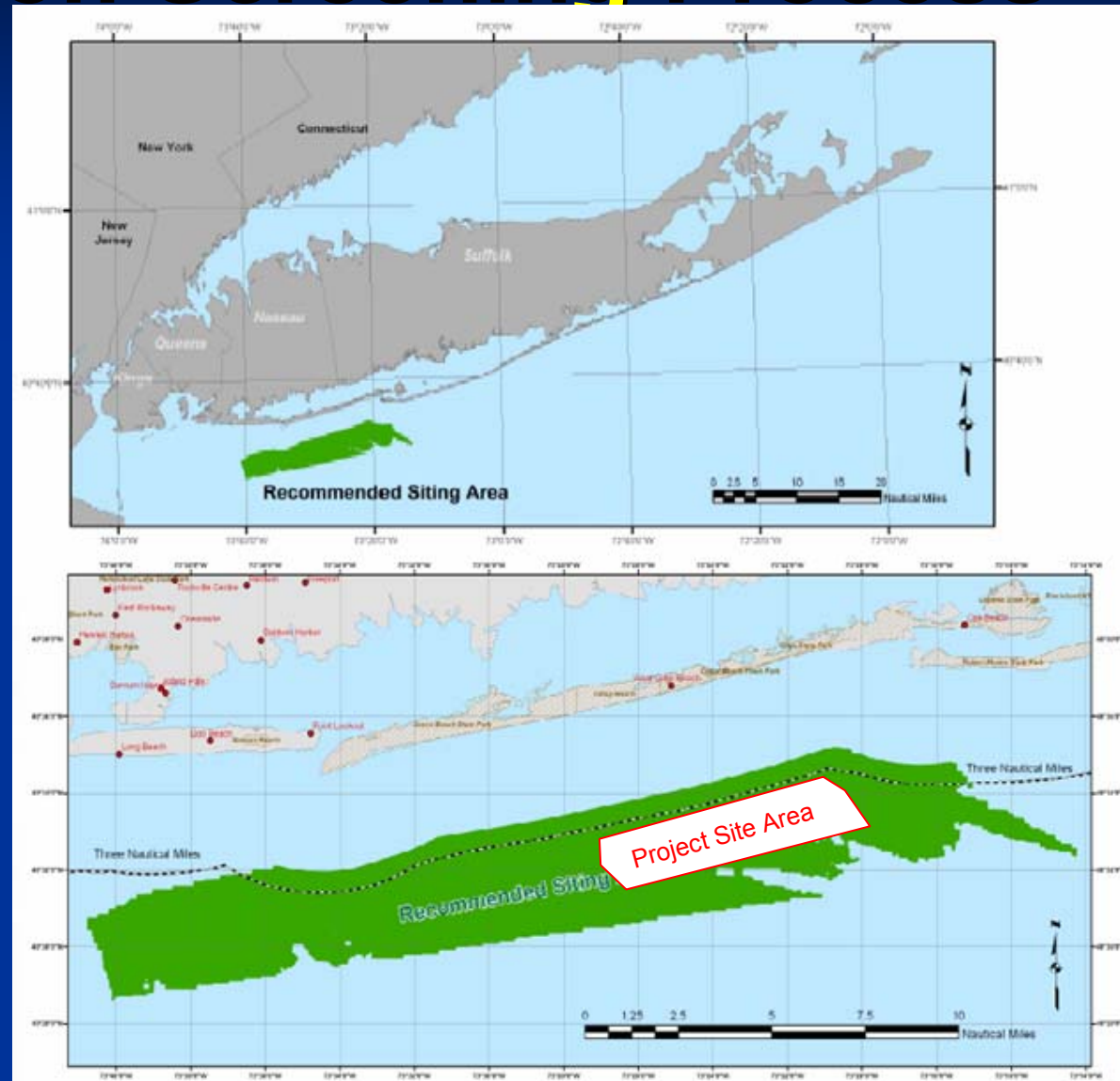
Site Selection Screening Process

- Maintain a minimum of 2.5 nm. distance from shore to limit visibility (green area)
- Maintain an adequate buffer from shipping lanes, bird and migratory routes and other factors (green area)



Site Selection Screening Process

- Recommended Area met all the criteria established for the development of a utility scale offshore wind park
- Recommended Area Detail



Project Responsibilities

- FPLE to construct, own, operate and maintain the 140 MW Offshore Wind Park
- LIPA responsible for 138 kV Interconnection Cable to Substation
- LIPA to purchase 100% electricity output under a Power Purchase Agreement
- LIPA responsible for decommissioning and site restoration

What is the Project?

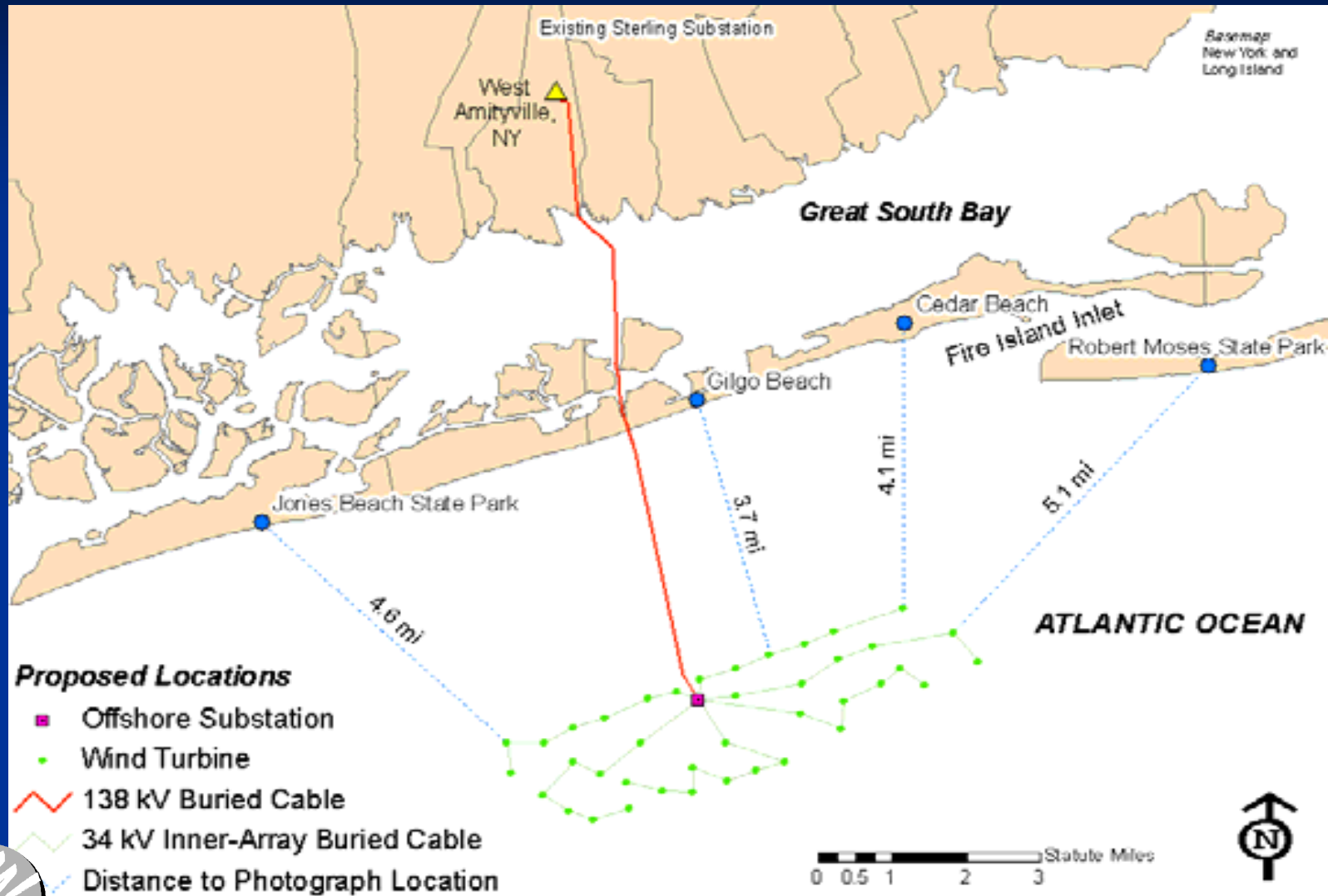
- *Long Island Offshore Wind Project*
 - State-of-the-art 140 MW offshore wind park
 - 40 wind turbines arranged to minimize visual & environmental impact
 - Buried Power Cables
 - 3.6 MW turbines
 - Commercial operations by 2008



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Proposed Site for Wind Park & Cable Route



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Long Island Benefits

- Estimated equivalent 13.5 million barrels oil not consumed (\$810 million oil savings @ \$60/ barrel) over 20 years
- Clean electricity for 44,000 Long Island homes
- Annual air pollution avoided:
 - *sulfur dioxide - 489 tons*
 - *nitrogen oxide - 221 tons*
 - *carbon dioxide - 235,000 tons*
- Energy to stay on Long Island
- Local economic benefits



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Photo Simulation from Gilgo Beach



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Photo Simulation from Gilgo Beach



This photo-rendering is based solely on aerial photograph interpretation, bearing of view, and lens setting.



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Photo Simulation from Jones Beach Central Mall



Draft 4-22-2005



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Photo Simulation from Jones Beach Central Mall



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Photo Simulation from Cedar Beach



Panoramic Photo Simulation from Cedar Beach



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Photo Simulation from Cedar Beach



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How Does the Approval & Environmental Review Process Work?

- **Major Permits/ Approvals**
 - US Army Corps of Engineers – Section 10
 - US Minerals Management Service – **NEPA Lead Agency**
 - US Federal Aviation Administration
 - US Coast Guard
 - US Fish & Wildlife Service & National Marine Fisheries Service
 - NYS Dept. of State-Coastal Consistency
 - NYS Office of Parks, Recreation and Historic Preservation
 - NYS Dept. of Public Service – Article 7 Transmission Line



How Will We Know What Potential Impacts This May Have On Our Environment?

- **Biological & Environmental:**
 - Birds, fisheries, marine mammals, visual simulations, vessel traffic, cultural resources
- **Geophysical/ Oceanographic:**
 - Tides & waves, bottom conditions, geology, sediment transport, weather events
- **Transmission:**
 - Cable routes, interconnection design
- **Legal & Regulatory:**
 - Rigorous environmental review pursuant to Federal and State Laws
 - Public comment

Project Avian Survey Vessels



Avian Radar



Benthic Survey Vessel



When Will This Process Be Completed?

- April 2005
 - Application submitted to U.S. Army Corps of Engineers
- August 2005
 - Energy Policy Act of 2005 makes Minerals Management Service lead Federal agency
- 2006
 - LIPA files cable application to NYS Public Service Commission
- 2006-2007
 - Project review, public comment and agency analysis
- 2007-2008
 - Equipment delivery, construction, operation



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